

It Is Claimed:

1. A composition comprising:

a biologically compatible material and a peptide carried by the material, the peptide having enhanced cell binding with respect to collagen, the peptide having a domain that mimics collagen binding to cells, said domain including at least -Ile-Ala- folded in a  $\beta$ -bend at physiologic conditions.

2. The composition as in claim 1 wherein the peptide is an amount effective to inhibit cell growth.

3. The composition as in claim 1 wherein the peptide is in an amount effective to promote cell attachment, and the material is adapted for tissue repair or tissue reconstruction.

4. The composition as in claim 3 wherein the material includes an apatite-based ceramic.

5. The composition as in claim 1 or 3 wherein the material includes a hydrogel.

6. The composition as in claim 1 or 3 wherein the material is in the form of polymer fibers.

7. The composite as in claim 1 or 3 wherein at least part of the material is a soluble polymer matrix or is a hydrogel matrix and the peptide is in a concentration of greater than about 50  $\mu$ g/ml.

8. The composite as in claim 1 wherein the peptide is covalently bound to the material.

9. The composite as in claim 8 wherein the material is in the form of fibers with interstices formed between fibers.